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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/897,904	07/05/2001	Tatsuo Fukui	109686	1427
25944	7590	12/14/2004	EXAMINER	
OLIFF & BERRIDGE, PLC P.O. BOX 19928 ALEXANDRIA, VA 22320			STOCK JR, GORDON J	
			ART UNIT	PAPER NUMBER
			2877	

DATE MAILED: 12/14/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

**Application No.**

09/897,904

**Applicant(s)**

FUKUI, TATSUO

**Examiner**

Gordon J Stock

**Art Unit**

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 2 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 28 September 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☒ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 3-10 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☐ Claim(s) \_\_\_\_\_ is/are rejected.
- 7) ☒ Claim(s) 3-10 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input checked="" type="checkbox"/> Other: <u>PTOL-413B</u>                          |

## DETAILED ACTION

### *Claim Objections*

1. **Claim 3** is objected to for the following: on line 18 “the line and space mark pattern image” lacks antecedent basis. Correction is required.
2. **Claim 5** is objected to for the following: on line 22 “the asymmetric focus characteristic” lacks antecedent basis; on line 23 “when forming image of a line and space mark image is formed within an image field area of said imaging device” should read –when forming the image of the line and space mark within an image field area of said imaging device—to correct for grammar. Corrections required.
3. **Claim 7** is objected to for the following: on line 10 “the signal intensity,” “non-stepped portion” and “the stepped portion” lack antecedent basis; on line 15 “the axis” lacks antecedent basis.
4. **Claim 9** is objected to for the following: on line 13 “with maintaining” should read –while maintaining--; on line 16 “the aperture stop” and “said imaging optical system” lack antecedent basis; on line 17 “the focus characteristic” lacks antecedent basis; on line 19 “the selected pattern area” lacks antecedent basis; on line 20 “the signal intensity” and “the non-stepped portion” lack antecedent basis; on line 21 “the stepped portion” lacks antecedent basis. In addition, on line 14 as discussed in the interview of December 1, 2004 with Mr. Tarik Nabi to clarify grammatically what comprises the adjusting an aperture stop step, it was suggested to have “comprising” on line 14 to read –wherein the providing an image field position adjustment mechanism for adjusting comprises:--. And with line 26 to correct the grammar it was suggested on December 1, 2004 to have “Q relates to said line and space mark in the entirety

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thereof at the time when the line and space mark image is formed within the image field of said imaging field, is zero;” read ---Q is zero and relates to a line and space mark in the entirety thereof at the time when the line and space mark image is formed within the image field of said imaging field;--. Corrections required.

5. **Claim 10** is objected to for the following: on line 15 “the aperture stop” lacks antecedent basis; on line 16 “the aperture stop of said imaging optical system” lacks antecedent basis; on line 18 “the focus characteristic” lacks antecedent basis; on line 21 “the selected pattern area” lacks antecedent basis; on line 22 “the signal intensity” and “the non-stepped portion” lack antecedent basis; on line 23 “the stepped portion” lacks antecedent basis; on line 29 “the field stop” lacks antecedent basis. In addition, on line 14 as discussed in the interview of December 1, 2004 with Mr. Tarik Nabi to clarify grammatically what comprises the adjusting an aperture stop step, it was suggested to have “comprising” on line 14 to read –wherein the providing an image field position adjustment mechanism for adjusting comprises:--. And with line 28 to correct the grammar it was suggested on December 1, 2004 to have “Q relates to said line and space mark in the entirety thereof at the time when the line and space mark image is formed within the image field of said imaging field, may be zero;” read ---Q is zero and relates to a line and space mark in the entirety thereof at the time when the line and space mark image is formed within the image field of said imaging field;--. Corrections required.

6. **Claims 4, 6, and 8** are objected to for being dependent upon an objected base claim.

***Allowable Subject Matter***

7. **Claims 3-10** would be allowable if amended to correct the objections states above.

As to **claim 3**, the prior art of record, taken alone or in combination, fails to disclose or render obvious in an optical position deviation detecting apparatus “wherein said field stop position adjustment mechanism adjusts the field stop position on the basis of an asymmetric focus characteristic,” in combination with the rest of the limitations of **claims 3, 4, 6, 7**.

As to **claim 5**, the prior art of record, taken alone or in combination, fails to disclose or render obvious in an optical position deviation detecting apparatus “wherein said field stop position adjustment mechanism adjusts the field stop position on the basis of an asymmetric focus characteristic,” in combination with the rest of the limitations of **claim 5**.

As to **claim 8**, the prior art of record, taken alone or in combination, fails to disclose or render obvious in an optical position deviation detecting apparatus “wherein said field stop position is so adjusted that at least one set of areas which are symmetric with respect to the center of the image field is selected and an amount of rotationally asymmetric aberration for every selected area is symmetric” in combination with the rest of the limitations of **claim 8**.

As to **claim 9**, the prior art of record, taken alone or in combination, fails to disclose or render obvious in an optical adjustment method “adjusting a position of a field stop of the irradiation optical system so that the asymmetric focus characteristic of said line and space mark pattern image exhibits a characteristic that is symmetric” in combination with the rest of the limitations of **claim 9**.

As to **claim 10**, the prior art of record, taken alone or in combination, fails to disclose or render obvious in an optical adjustment method “adjusting a position of a field stop on the basis of an asymmetric focus characteristic curve” in combination with the rest of the limitations of **claim 10**.

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***Response to Arguments***

8. Applicant's arguments, see Remarks, filed September 28, 2004, with respect to the rejection of the claims under 35 U.S.C. 103(a) in the last action have been fully considered and are persuasive. Therefore, due to the persuasiveness of the arguments and the amendment to the claims, the rejection of the claims under 35 U.S.C. 103(a) has been withdrawn.

***Conclusion***

9. This application is in condition for allowance except for the following formal matters:

The objections to the claims as stated above need to be addressed.

Prosecution on the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

A shortened statutory period for reply to this action is set to expire **TWO MONTHS** from the mailing date of this letter.

***Fax/Telephone Numbers***

If the applicant wishes to send a fax dealing with either a proposed amendment or a discussion with a phone interview, then the fax should:

- 1) Contain either a statement "DRAFT" or "PROPOSED AMENDMENT" on the fax cover sheet; and
- 2) Should be unsigned by the attorney or agent.

This will ensure that it will not be entered into the case and will be forwarded to the examiner as quickly as possible.

*Papers related to the application may be submitted to Group 2800 by Fax transmission. Papers should be faxed to Group 2800 via the PTO Fax machine located in Crystal Plaza 4. The form of such papers must conform to the notice published in the Official Gazette, 1096 OG 30 (November 15, 1989). The CP4 Fax Machine number is: (703) 872-9306*

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Gordon J. Stock whose telephone number is (571) 272-2431.

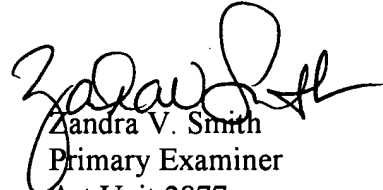
The examiner can normally be reached on Monday-Friday, 10:00 a.m. - 6:30 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gregory J. Toatley, Jr., can be reached at 571-272-2800 ext 77.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private Pair system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

gs

December 10, 2004

  
Zandra V. Smith  
Primary Examiner  
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